USER'S GUIDE

DIGITAL OUTDOOR SIGNAGE

**MODELS : H460S*, H461S*, H551S*,
H461M*, H551M***

DIGITAL SIGNAGE

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* REMOTE CONTROL / RS232C COMMAND SPEC

Major features

This product has been designed to enable users ease of use and display information effectively and conveniently.

- Anti-vandalism glass
- All Weather Capable
- Automatic temperature control
- Auto Light Sensor function
- High brightness level for readability against direct sunlight

Safety Information

This product is designed to ensure user's safety.
Avoid the following items to prevent serious electric shock and other dangers.

- Do not cover the ventilation holes with anything or insert anything into the ventilation holes.
- Do not place product on a location where damage can be caused by oil, smoke and etc.
- The product is not suitable for use at visual display workplaces according to §2 of the German Ordinance for Work with Visual Display Units.
- An apparatus with CLASS I construction shall be connected to a Mains socket outlet with a protective earthing connection.
- Make sure that the power cord and other cables are properly plugged in.
- When not connecting proper power plug into power outlet, otherwise this may cause fire by electric shock.
- Do not touch the power cord with wet hands, otherwise it may cause electric shock.
- Overloaded AC outlets and extension cables are as dangerous as the power cord being damaged. Call service engineer for replacement since it may cause electric shock or fire.
- Do not use multiple devices in a single power outlet, otherwise this may cause overheating or fire.
- The main plug of the power supply cord shall remain readily operable. The disconnect device shall remain readily operable.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

- Do not use or place sharp objects near the LCD surface because this can cause in itself damage to the product.
- When cleaning the LCD screen / surface, do not use strong chemicals such as ethyl, ethyl or a Isopropyl. This can seriously damage the special coatings on the screen. Use the soft cloths only adding a little water.
- When cleaning the product, make sure to remove the power cord and wipe with a dry cloth.
- Keep batteries for the remote control being out of children's sight.
- Batteries should be inserted with correct polarity (+,-).
- Use only new batteries. Do not use new battery and used battery at the same time.
- When the product keeps un-using for a long time, make sure to unplug the power cord.
- In case of damage or breakage, do not attempt to self repair.
  Please contact the local service engineer.
- Ensure that more than 4 people at least should work together when moving, lifting or installing.
- When a cart is used, use it with cautious when moving the cart/apparatus combination to avoid injury from tip-over.

Be sure to understand

Image quality of the product

⚠ **CAUSE**

Due to the nature of LCD's property, afterimage can occur. Afterimage appears when identical frames / images are displayed continuously. If displayed for prolonged periods of time this can become permanent.

⚠ **PREVENTION**

When you display a freeze frame for a long time, lower the brightness and contrast (Brightness, 70/ Contrast, 80). Also it can be prevented by using moving frame.

⚠ **COUNTERMEASURES**

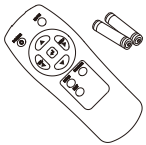
Temporary afterimage can be alleviated by displaying white or moving frame about 10 hours. (But, permanent afterimage cannot be disappeared according to the property of LCD) This method is used to remove temporary afterimage that may occur after displaying a still frame for a certain time.

It can take several minutes or hours to remove afterimage according to the severity. In the case that your cannot avoid displaying identical still image continuously, you can prevent it by displaying moving image for 2 or 3 minutes in every hour. As the brightness of still image and time of display are the cause of afterimage, you are recommended to lower the brightness in that case.

! **Above problem shall not be covered by warranty.**

Check the accessories list

Please check the following components provided with the product after you open the box.



Remote control

User's manual

! **Please check the following components provided with the product after you open the box and contact the dealer if any missing. The contents may vary depending on models and sometimes the contents may be attached on the product.**

Proper location and recommended installation

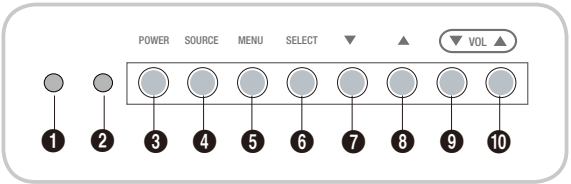
- Place product on a stable surface.
- Product is installed at where the place is clean and product does not sink under water even though heavy raining. It must be installed at where water does not flood at least over the bottom of the product.
- Locate the product at least 1 m away from the electric appliance or heating product.
- Keep the product out of direct ray of light and locate screen not to be reflected by the sunlight.
- Install product in a well ventilated location. Ensure that there is a clearance of more than 100 cm from the wall.
- On LCD panel direction basis, install product avoiding western and eastern direction.
- Make sure anchors to be tightened firmly before installation.

! For further details such a base construction and anchor, refer to appendix guide on installation.

Please take extra care during installation, It can cause damage if the unit is handled badly or knocked.

Title and function of each part

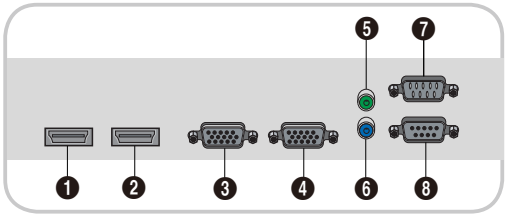
Control panel



** The locations of OSD board and remote control receiving sensor may vary depending on models.*

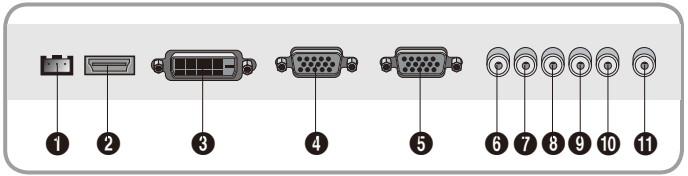
1. Remote control receiving sensor.
2. Power display LED red-stand by/ Green-working.
3. ~ 10 OSD button.
3. Power button : to turn the power on or off.
4. Input selection button : to select other connected device. (Option)
5. Menu button : to display menu or exit from the menu.
6. Select button.
7. To move down in OSD menu.
8. To move up in OSD menu.
9. To move left and control the volume down in OSD menu.
10. To move right and control the volume up OSD menu.

Terminal panel - Type A



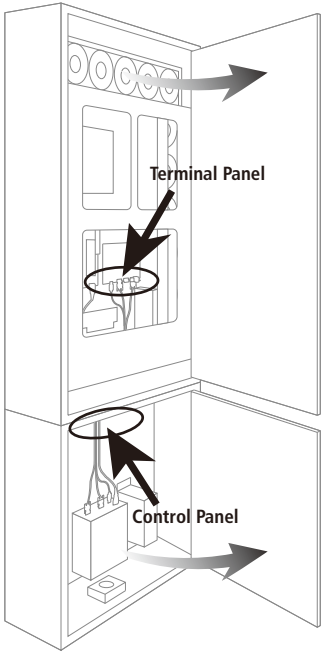
1. HDMI IN
2. DVI OUT
3. D-SUB IN
4. D-SUB OUT
5. UPGRADE
6. PC AUDIO IN
7. RS-232C OUT
8. RS-232C IN

Terminal panel - Type B

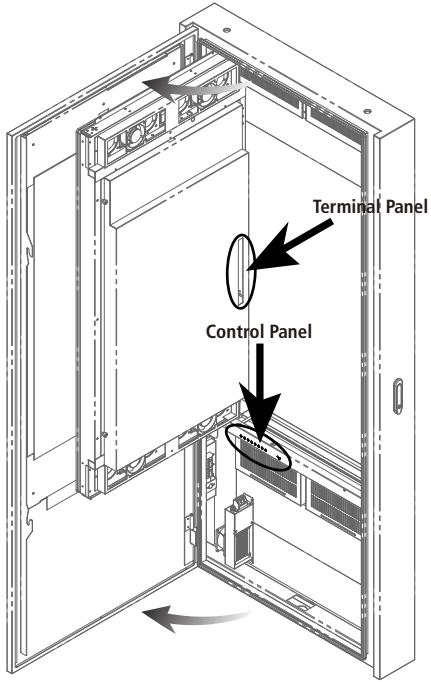


1. PIR SENSOR IN (Option)
2. HDMI IN
3. DVI OUT
4. PC D-SUB IN
5. PC D-SUB OUT
6. PC AUDIO IN
7. 10. 11. UPGRADE Port :
*this port is used for upgrade service and not for general users.
8. RS-232C IN
9. RS-232C OUT

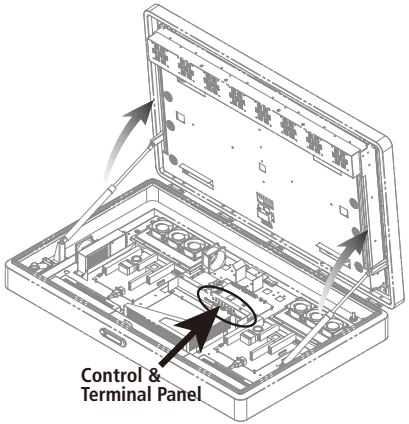
• Model: H460S* - Rear



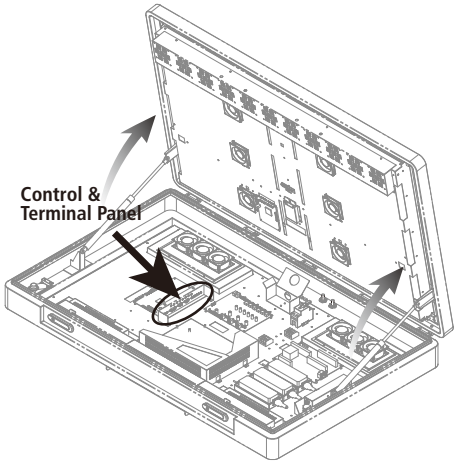
• Model: H461S*, H551S* - Front



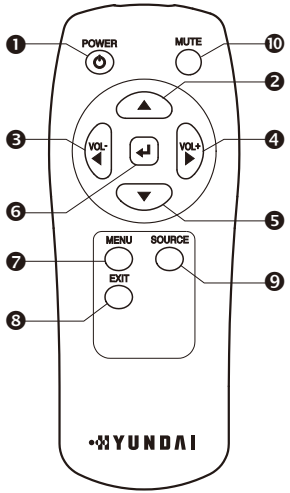
• **Model: H461M* - Front**



• **Model: H551M* - Front**



Remote control



1. To turn the power on or off.
2. Move up in OSD menu.
3. To move left or control the volume down in OSD menu.
4. To move right or control the volume up in OSD menu.
5. To move down in OSD menu.
6. [ENTER] Select in OSD menu.
7. Display the OSD menu.
8. Close the OSD menu.
9. Display the menu of signal source and choose it.
10. Temporary sound switch off.

[TIP] If it doesn't need to control display by a remote-controller, press button of remote-controller in order following.

MENU → SOURCE → EXIT → ▼ → ENTER(↵)

* Press button once again in order above so that original condition is returned.

Support timing for HDMI / DVI

NO	Resolution	Horizontal frequency (KHz)	Vertical frequency (Hz)
1	480p	640 x 480p	60
2	576p	720 x 576p	50
3	720p	1280 x 720p	50 / 60
4	1080i	1920 x 1080i	50 / 60
5	640 x 480	31.47	59.94
6	800 x 600	37.88	60.32
7	1024 x 768	48.36	60
8	1360 x 768	47.70	60
9*	1600 x 1200	75.00	60
10*	1920 x 1080	67.50	60
11*	1080p	1920 x 1080p	60

! 9, 10 and 11 are only for Full HD

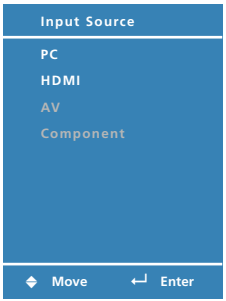
Support timing for PC

NO	Resolution	Horizontal frequency (KHz)	Vertical frequency (Hz)
1	640 x 480	31.47 / 37.5	59.94 / 75
2	720 x 400	37.5	70
3	800 x 600	37.88 / 46.88 / 48.28	60.32 / 72.19 / 75
4	1024 x 768	48.36 / 60.02	60.00 / 75.03
5	1360 x 768	47.71	60.00
6*	1280 x 1024	64.00	60.00
7*	1600 x 1200	75.00	60.00
8*	1920 x 1080	67.50	60.00

! 6, 7 and 8 are only for Full HD

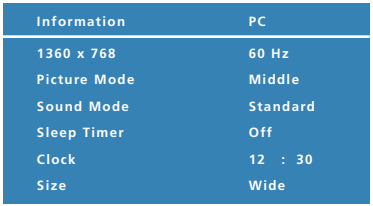
Adjusting OSD and explanation of its function

Input & Information



1. Press the SOURCE button.
2. Press ▲ / ▼ button to select the desired Source.
3. Press ↵ button to selection.

* AV or COMPONENT source is optional.



Press ↵ button and the information about input source, signal, set-up is displayed as shown on the picture.

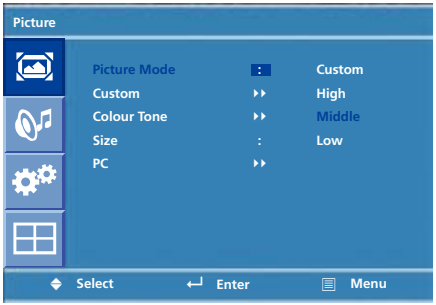
"No Signal" message is shown in case of no connected signals.

"Out of Range" Message is shown in case of the excess of an input source range.

The brightness of the display product may go dark in case the temperature inside the product is too high.
It's the protection function and restores the brightness to its original state after a while.

How to Select the Picture Mode

Users can automatically adjust the picture mode according to the input mode.

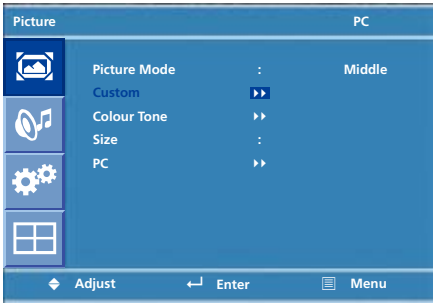


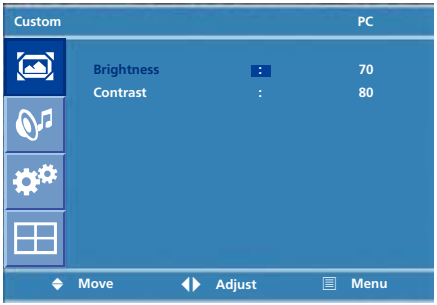
1. Press Menu button.
   Menu items appear on the screen.
2. Press ↵ button to select "Picture" Icon. "Picture mode" is highlighted.
3. Press ▶ or ↵ buttons to select "Picture mode".
4. The menu changes in the following order.
   Custom -> High -> Middle -> Low
5. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

✔ *Menu of PC doesn't appear on OSD when user uses HDMI and DVI signal.*

How to Set the Desired Picture

Users can manually adjust their desired picture



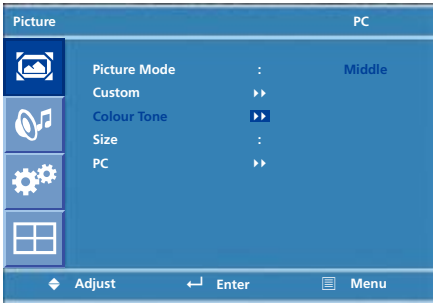


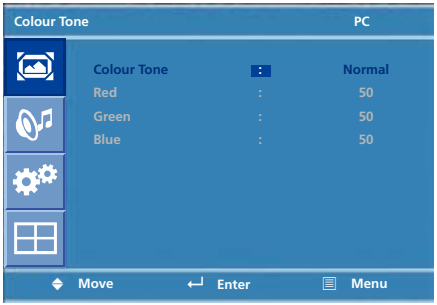
1. Press Menu button. Menu items appear on the screen.
2. Press ▶ or ↵ buttons to select "Picture Mode".
3. Press ▲ / ▼ button to move to "Custom" and press ▶ or ↵ buttons to go to the sub menu. Custom menu will appear.
4. Select required option by pressing the ▲ / ▼ or ↵ button, then Press ◀ / ▶ button to adjust.
5. Press EXIT button to escape from OSD MENU or press MENU button to return to the previous menu.

   - Brightness : Adjust the brightness of the entire picture.
   - Contrast : Adjust the contrast of the object and backgrounds.

How to Select a Colour Tone

Users can adjust color as users want.

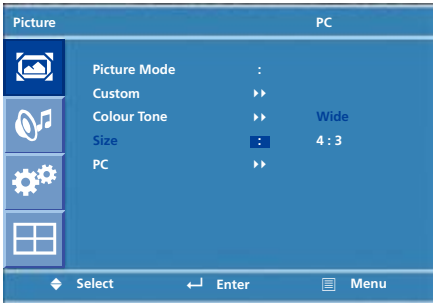


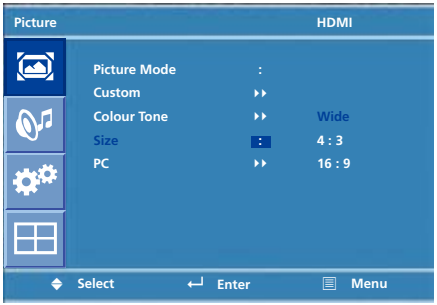


1. Press Menu button. Menu items appear on the screen.
2. Press ▶ or ↵ buttons to select "Picture Mode".
3. Press ▲ / ▼ button to move to "Colour Tone" and press ▶ or ↵ buttons to go to the sub menu. Colour Tone menu will appear.
4. Press ▶ or ↵ buttons to select "Colour Tone"
5. Press ▲ / ▼ button, then the menu changes in the following order. Custom -> Cool2 -> Cool1 -> Normal -> Warm1 -> Warm2
6. If you choose Custom, then “Red”, “Green”, “Blue” is activated.
7. Press the Menu button or ◀ button to go back to the previous menu, “Red”, “Green”, “Blue” is enabled.
8. Select required option by pressing the ▲ / ▼ or ↵ button, then Press ◀ / ▶ button to adjust.
9. Press EXIT button to escape from OSD MENU or press MENU button to return to the previous menu.

How to Set the Display Size

Users can adjust the display scale as they want





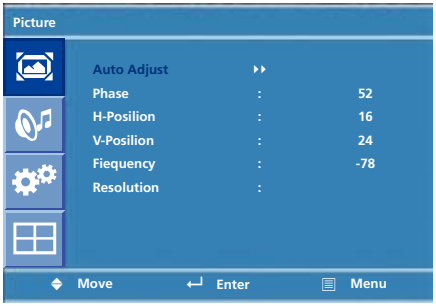
1. Press Menu button. Menu items appear on the screen.
2. Press ↵ button to select "Picture" Icon. "Picture Mode" is highlighted.
3. Press ▲ / ▼ buttons to move to "Size".
4. Press ◀ / ▶ or ↵ buttons and press ▲ / ▼ then the mode change in the following order.
   - Wide -> 4 : 3

* The display size aspect mode change in the HDMI, DVI mode in the following order.
   - Wide -> 4 : 3 -> 16 : 9

5. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

✔ *Menu of PC doesn't appear on OSD when user uses HDMI and DVI signal.*

How to set image adjustment in PC mode (Supported only in PC mode)

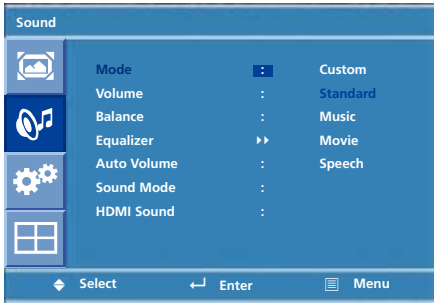


1. Press Menu button.
   Menu items appear on the screen.
2. Press ↵ button to select "Picture" Icon.
   "Picture Mode" is highlighted.
3. Press ▲ / ▼ buttons to move to PC and press ▶ or ↵ buttons to select to "PC"
   "Auto Adjust" is high lighted.
4. Press ↵ button to execute the "Auto Adjust"
5. Select the required option by pressing the ◀ / ▶ or ↵ button, then press ◀ / ▶button to adjust
6. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

- Auto Adjust : Horizontal/vertical positions are automatically adjusted.
- Phase : To eliminate the shake of the picture.
- H-Position : To adjust the horizontal position of the picture.
- V-Position : To adjust the vertical position of the picture.
- Frequency : To eliminate the shake of picture.
- Resolution : Selecting resolution is allowed to only set to 1024x768, 1280x768, 1360x768, 1366x768.
  Select corresponsive resolution with specified resolution of image.

How to Select the Audio Mode (Speaker Option)

Users can adjust sound mode automatically as they want.

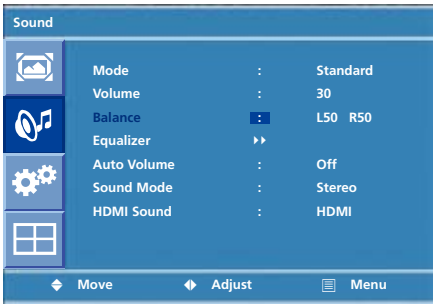


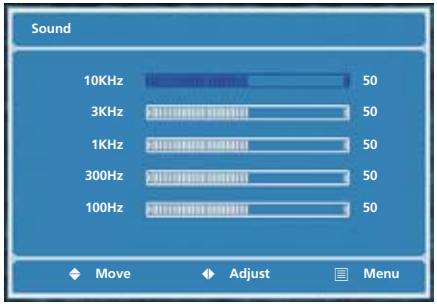
1. Press Menu button. Menu items appear on the screen.
2. Press ▲ / ▼ buttons to move to “Sound” Icon.
3. Press ↵ button to select “Sound” Icon. “Mode” is highlighted.
4. Press ▶ or ↵ buttons, to select to Sound mode. then the menu changes in the following order. Custom->Standard -> Music -> Movie -> Speech
5. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

- Custom : When the user wants to set the values directly.
- Standard : For the general sound. Most audio contents are appropriate to this mode.
- Music : For enjoying original sound.
- Movie : Grandiose sound.
- Speech : Clear sound.

How to adjust the Audio Mode

Users can adjust sound mode automatically as they want.



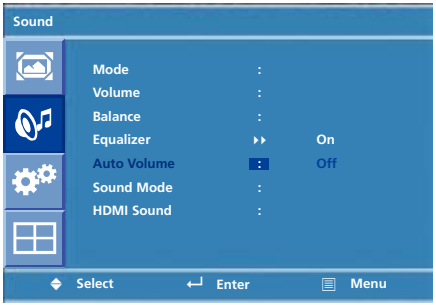


1. Press Menu button. Menu items appear on the screen.
2. Press ▲ / ▼ buttons to move to "Sound" Icon.
3. Press ↵ button to select "Sound" Icon. "Mode" is highlighted.
4. Press ▲ / ▼ buttons to move to "Balance" or "Equalizer" .
5. Press ↵ buttons to select "Balance" or "Equalizer". Balance or Equalizer menu appears.
6. Select required option by pressing the ▲ / ▼ buttons, then Press ◀ / ▶ buttons to adjust.
7. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

- Balance : Adjusts the balance of left and right speakers.
- Equalizer : Adjusts the audio output signal in the desired band.

How to Select Auto Volume

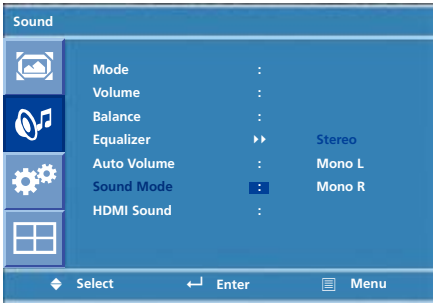
This function will automatically give a similar volume size to each channel.



1. Press Menu button.
   Menu items appear on the screen.
2. Press ▲ / ▼ buttons to move to "Sound" Icon.
3. Press ↵ button to select "Sound" Icon.
   "Mode" is highlighted.
4. Press ▲ / ▼ buttons to move to "Auto Volume".
5. Press ◀ / ▶ or ↵ buttons to select "On/Off".
6. Press ▲ / ▼ or ↵ buttons to set to "On/Off".
7. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu

How to Select Sound Mode

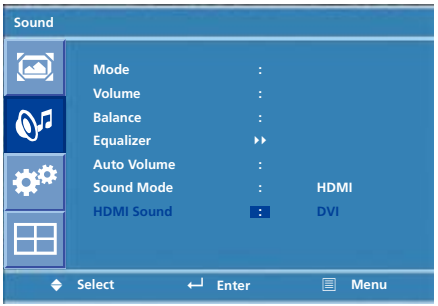
Depending on the particular program being broadcast, you can select stereo or mono.



1. Press Menu button.
   Menu items appear on the screen.
2. Press ↵ button to select "Sound" Icon.
   "Mode" is highlighted.
3. Press ▲ / ▼ buttons to move to "Sound Mode".
4. Press ▶ or ↵ buttons to select to "Sound Mode".
5. Press ▲ / ▼ buttons to select to "Stereo"," Mono L"or "Mono R.
6. Press exit button to escape OSD MENU or press MENU button to return to the previous menu

- Choose "Stereo" for channels that are broadcasting in Stereo.
- Choose "Mono" for channels that are broadcasting in Mono, or if you are having difficultly receiving a Stereo signal.

How to Select HDMI Sound

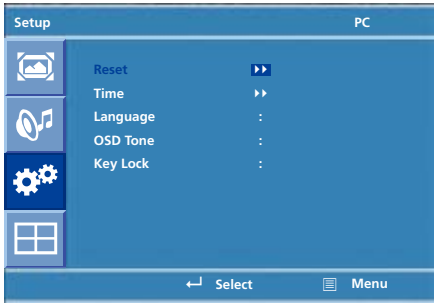


1. Press Menu button.
   Menu items appear on the screen.
2. Press ↵ button to select “Sound” Icon.
   “Mode” is highlighted.
3. Press ▲ / ▼ buttons to move to “HDMI Sound”.
4. Press ▶ or ↵ buttons to select to “HDMI Sound”.
5. Press ▲ / ▼ buttons to select to “DVI”.
6. Press exit button to escape OSD MENU or press MENU button to return to the previous menu

✔ *HDMI : Audio signal is included in the HDMI signal.*

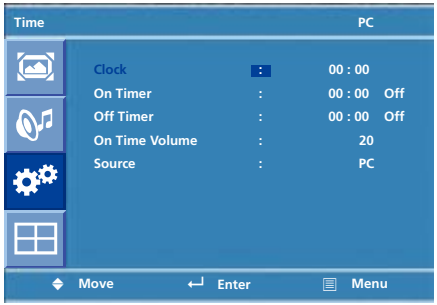
✔ *DVI : If audio signal is not inclulded in the HDMI signal, you can listen audio from PC audio port.*

How to Reset



1. Press Menu button. Menu items appear on the screen.
2. Press ▲ / ▼ button to move to "Setup Icon" and Press ▶ or ↵ buttons.
   "Reset" is highlighted.
3. Press ▶ or ↵ buttons to select to "Reset".
   User setting Value will initialize.
4. Press EXIT button to escape from OSD MENU or press MENU button to return to the previous menu.

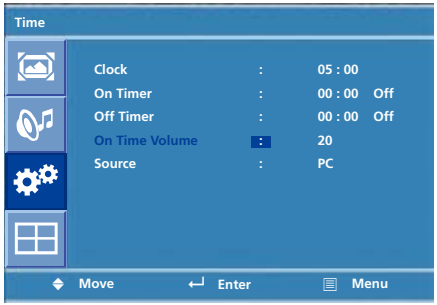
How to Set Clock,Sleep Time, ON/OFF Time



1. Press Menu button. Menu items appear on the screen.
2. Press ▲ / ▼ button to move to "Setup Icon" and Press ▶ or ↵ buttons.
3. Press ▲ / ▼ button to move to "Time" and Press ▶ or ↵ buttons.
   Time menu will appear, then "Clock" is highlighted.
4. Press ◀ / ▶ button to move between Hour, Minute and Press ▲ / ▼ button to set Hour, Minute.

   Go to step 5 if you need to set the "On or Off Timer".

When the power supply (AC main power) is cut off, the clock is reset to the value before the Timer set.



<Go to step 6 if you need to set the "On or Off Timer">
6. Press ▲ / ▼ buttons to move to "On or Off Timer".
7. Press ▶ or ↵ buttons to select "On or Off Timer" .
8. Press ◀ / ▶ buttons to move between Hour, Minute and on/off and Press ▲ / ▼ buttons to set Hour, Minute and on/off

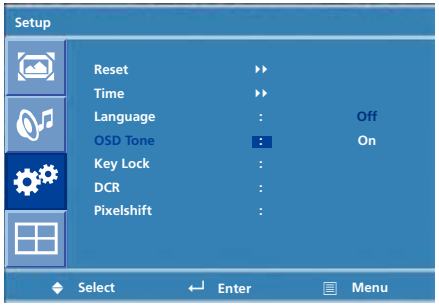
<go to step 9 if you need to set the "On Time Volume">
9. Press ▲ / ▼ buttons to move to "On Time Volume".
10. Press ◀ / ▶ buttons to adjust Volume.

<go to step 11 if you need to set the "Source">
11. Press ▲ / ▼ buttons to move to "Source"
12. Press ▶ or ↵ buttons to select to "Source"
13. Press ▲ / ▼ buttons to set to Source

Choosing the Your Languages

1. Press Menu button.
   Menu items appear on the screen.
2. Press ↵ button to select "Setup" Icon.
   "Reset" is highlighted.
3. Press ▲ / ▼ button to move to "Language" and press ▶ or ↵ button to select to “Language”.
4. Press ▲ / ▼ buttons to set to language.
5. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

How to set OSD Transparency



1. Press Menu button.
   Menu items appear on the screen.
2. Press ↵ button to select "Setup" Icon.
   "Reset" is highlighted.
3. Press ▲ / ▼ buttons to move to "OSD Tone"
4. Press ▶ or ↵ buttons to select to "OSD Tone".
5. Press ▲ / ▼ or ↵ buttons to set to "On/Off".

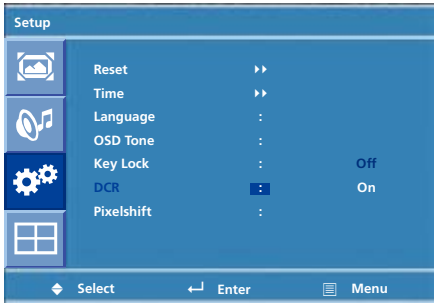
How to Set Key-Lock

User can lock the control buttons on the front bottom of the Monitor.

1. Press Menu button.
   Menu items appear on the screen.
2. Press ▲ / ▼ button to move to "Setup" Icon.
3. Press ↵ button to select "Setup" Icon.
   "Reset" is highlighted
4. Press ▲ / ▼ buttons to move to "Key Lock".
5. Press ▶ or ↵ buttons to select to "Key Lock".
6. Press ▲ / ▼ or ↵ buttons to set to "On/Off".
7. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

✔ *If you turn off the AC power, key-lock function is unlock.*

How to select DCR



1. Press Menu button.
   Menu items appear on the screen.
2. Press ▲ / ▼ button to move to “Setup” Icon.
3. Press ↵ button to select "Setup" Icon.
   "Reset" is highlighted.
4. Press ▲ / ▼ buttons to move to “DCR”.
5. Press ▶ or ↵ buttons to select to "DCR".
6. Press ▲ / ▼ or ↵ buttons to set to "On/Off".
7. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

How to select Pixelshift

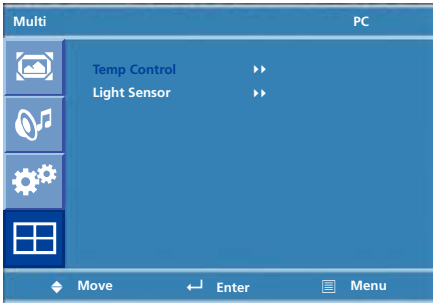
This function prevents image burn-in problem on LCD screen.

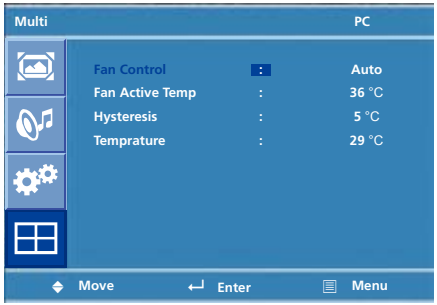
1. Press Menu button.
   Menu items appear on the screen.
2. Press ▲ / ▼ button to move to “Setup” Icon.
3. Press ↵ button to select "Setup" Icon.
   "Reset" is highlighted.
4. Press ▲ / ▼ buttons to move to “Pixelshift”.
5. Press ▶ or ↵ buttons to select to "Pixelshift".
6. Press ▲ / ▼ or ↵ buttons to set to "On/Off".
7. Press EXIT button to escape OSD MENU or press MENU button to return to the previous menu.

✔ *When Pixelshift option is on, the image moves on the display periodically. It might be seen like the image pops but not the symptoms of display error.*

How to Set the Temperature Control

"Temperature Control" allows you set up fan operation according to interior temperture of the product.





1. Press Menu button. Menu items appear on the screen.
2. Press ▲ / ▼ button to move to "Multi Icon".
3. Press ▶ or ↵ buttons to select "Multi Icon", then "Temp Control" is highlighted.
4. Press ▶ or ↵ buttons to select "Temp Control". Temperature Control menu appears.
5. Select required option by pressing the ▲ / ▼ button, then Press ◀ / ▶ button to set and adjust.

   "Fan Control" - AS the fan operation options, following 3 options are available.

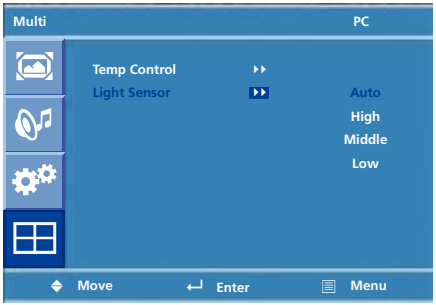
   - Off : Fan is idle in Off status.
   - On : Fan is working in On-status.
   - Auto : Fan start working when the working temperature is higher than the measured temperature.

6. Press EXIT button to escape from OSD MENU or press MENU button to return to the previous menu.

   - Fan active Temp : Set up value to start the fan.
   - Hysteresis : Tolerance value of fan operation temperature.
   - Temperature : Measure current temperature by sensor affixed to PCB'A.

How to Set the Light Sensor

"Light sensor" is a feature which the product have the ability to adjust the brightness of the screen automatically according to the external brightness.



1. Press Menu button. Menu items appear on the screen.
2. Press ▲ / ▼ button to move to "Multi Icon" and Press ▶ or ↵ buttons.
3. Press ▲ / ▼ button to move to "Light Sensor.
4. Press ◀ / ▶ or ↵ buttons and press ▲ / ▼ then the mode changes in the following order.
   - Auto : It will automatically adjust the screen brightness according to the external brightness of the product.
   - High : Product is adjusted to the brightness of the brightest.
   - Middle : The brightness of the product to the general conditions.
   - Low : The brightness of product weaker conditions.
5. Press EXIT button to escape from OSD MENU or press MENU button to return to the previous menu.

Diagnosis

When the product is not working properly, please check before you the customer center.

Symptoms	How to solve the problem
Screen displays late after the power is on.	It happens not to show the screen noise when the power is on. Therefore it is not a defect. But if the screen doesn't show up within 5 minutes after turning on, please contact the customer center.
The screen is too dark or bright?	Adjust the brightness or contrast.
The screen doesn't show up indication "Out of range".	You are using a signal which is outside the operating frequencies of the product (Unsupported), please change your video signal.
When the screen is scrambled.	Please check the cable connection and the signal generator and contact customer center.
Automatic switching-on function is not working / the input data were disappeared when reboot the system after setting up the time	Automatic switching-on function is working when the product has been turned off via remote control or power button on main body. It is because that the set-up values are deleted when the power cord is unplugged.
The screen and sound are not synchronized	Check if the power is on, suspended or is correctly plugged into the outlet. Plug the power cord of other peripheral device to the outlet that the product is being connected.

Symptoms	How to solve the problem
The screen displays without the sound.	Check the volume up and down with remote control and audio connection cable
No sound from either right speaker or left speaker.	Confirm the status of the sound balance on OSD menu and check the connection of speaker cable.
Remote control doesn't work.	Check if any foreign substances in the sensor and the polarity of battery is inserted. If the batteries are drained, replace them with new batteries.
PC D-SUB doesn't work.	Set up the resolution referring to frequency table of input terminal. And re-boot the system as it supports Plug and Play.
Fan on the rear doesn't work	Check the status of temperature control on OSD menu

• If any problem is unsolved after trying all of the above diagnosis, please call the customer center.

Specifications

LCD	**H460S* :** 1366 x 768 Pixel (HD) **H461S*, H461M*, H551S*, H551M* :** 1920 x 1080 Pixel (Full HD)
Screen size (HxV/mm)	**H460S*, H461S*, H461M* :** 1018.4 x 572.5 mm **H551S*, H551M* :** 1209.6 x 680.4mm
Recommended resolution	**H460S* :** 1360 x 768 @60Hz **H461S*, H461M*, H551S*, H551M* :** 1920 x 1080P @ 60Hz
Input	**H460S*, H461S* :** HDMI, D-Sub, RS232C, PC Audio **H461M*, H551S*, H551M* :** HDMI, D-Sub, RS232, PC Audio
Output	**H460S*, H461S* :** DVI, D-Sub, RS232 **H461M*, H551S*, H551M* :** DVI, D-Sub, RS232
Power	AC 220 - 240V 50 / 60 Hz, AC 100 - 120V 50 / 60 Hz (option)
Consumption	**H460S* :** 500 W (Typ.), 1.75 kw (Max.) **H461S*, H461M* :** 410 W (Typ.), 1.26 kw (Max.) **H551S*, H551M* :** 600 W (Typ.), 1.45 kw (Max.)
Control type	Remote control, key control

• Above specification may be changed without prior notification for quality improvement.

< REMOTE CONTROL SPEC >

1. REMOTE CONTROL WAVE FORM

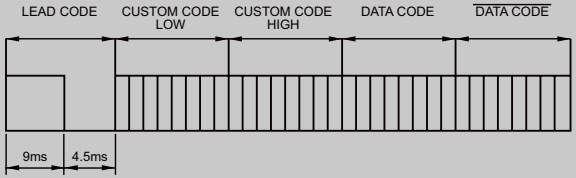
1) Remote Control System Infrared rey system

fosc=455KHZ fc=fosc/2=37.917KHZ

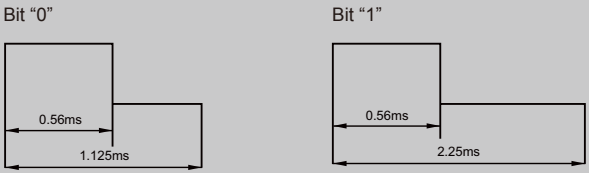
2) Signal code

• Transmission

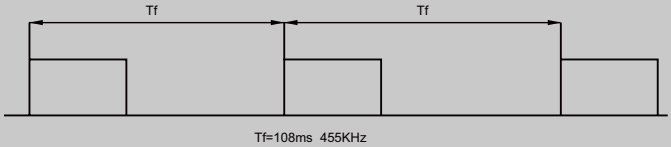
- One pulse



- Bit Desciption



- Flame Interval

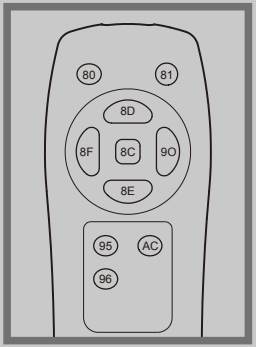


2. REMOTE CONTROL KEY CODE TABLE

Custom Code : 7788H

KEY	DATA
POWER	0x80
MUTE	0x81
MENU	0x95
EXIT	0x96
SOURCE	0xAC
ENTER (↵)	0x8C
UP	0x8D
DOWN	0x8E
LEFT	0x8F
RIGHT	0x90

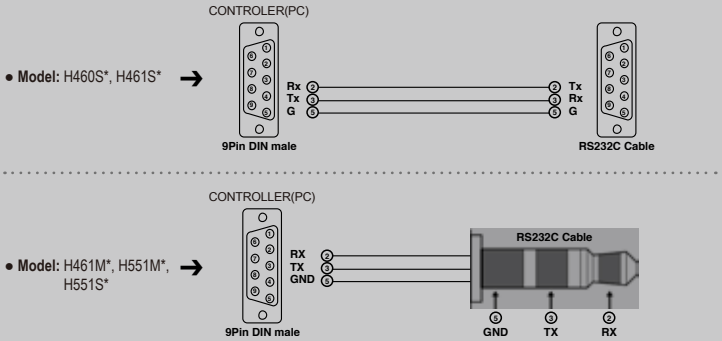
DATA LAYOUT



< RS232C COMMAND SPEC >

1. CONFIGURATION

1) SPEED : 9600 Baud/s, 8 bit, No parity, 1 Stop bit.
2) Cable Connection



2. COMMAND FORMAT

- SET ID must select from the OSD menu and can't be select through the COMMAND.
- Only one unit can be set as Master unit, select Master ON from the OSD Menu. (DEFAULT OFF)
- For viewing COMMAND from Hyper Terminal windows, One unit must set as MASTER ON

1) Data Format

Item	HEADER	SET ID	COMMAND	END
askii	did:	xxx- or all-	follow 2.2	.
hexa	0x64 0x69 0x64 0x3A	0x78 0x78 0x78 0x2D or 0x61 0x6C 0x6C 0x2D	follow 2.2	0x2E

HEADER : Command head code.
SET ID : Set ID.
all unit control - "xxx- or all-"
unit no : "01 ~ 99"
COMMAND : follow 2.2
END : inform end of send data.

Example. 1 To power on Set ID No 1

Item	HEADER	SET ID	COMMAND	END
askii	did:	01-	pn	.
hexa	0x64 0x69 0x64 0x3A	0x30 0x31 0x2D	0x70 0x6E	0x2E
decimal	100 105 100 58	48 49 45	112 110	46

Example. 2 To FAN on Set ID No 2

Item	HEADER	SET ID	COMMAND	END
askii	did:	02-	fn	.
hexa	0x64 0x69 0x64 0x3A	0x30 0x32 0x2D	0x70 0x6E	0x2E
decimal	100 105 100 58	48 50 45	102 110	46

2) Command Type

Item	Command	Description	hexa
Power	**pn**	power on	0x70 0x6E
	pf	power off	0x70 0x66
	ps	on, video out / on, video in / off, video out / off, video in / on, dpms mode	0x70 0x73
Input - Source	**sd**	input hdmi	0x73 0x64
	sv	input dvi	0x73 0x76
	sp	input pc	0x73 0x70
	sc	input component	0x73 0x63
	sa	input av	0x73 0x61
	sdp	input Droid PC	0x73 0x64 0x70
	sr	input Display Port	0x73 0x72
	is	input source status	0x69 0x73
Picture	**pc**	picture size : 4:3	0x70 0x63
	pw	picture size : wide	0x70 0x77
	at	pc auto	0x61 0x74
	rt	?x?, h?, v? ex) "1920x1080, h47, v60"	0x72 0x74
Audio	**zb**	volume up	0x7A 0x62
	zc	volume down	0x7A 0x63
Error	**"Error"**		
Return 232	**rf**	Return 232 off	0x72 0x66
	ro	Return 232 on	0x72 0x6F
	If you want receive return message in power off or DPMS. To set return 232 "ON".		